



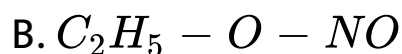
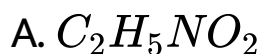
CHEMISTRY

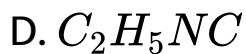
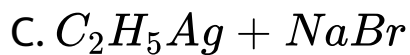
NCERT - NCERT CHEMISTRY(GUJRATI)

ORGANIC NITROGEN COMPOUNDS

Self Evaluation A Choose The Correct Answer

1. Bromo ethane reacts with silver nitrite to give

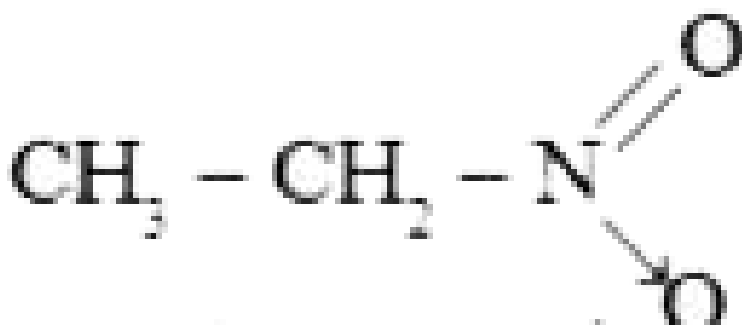




Answer:

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2. The isomerism exhibited by



and



A. position

B. chain

C. functional

D. tautomerism

Answer:



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3. In nitro alkanes $-NO_2$ group is converted to $-NH_2$ group by the reaction with

A. Sn / HCl

B. Zn dust

C. Zn / NH_4Cl

D. $Zn / NaOH$

Answer:

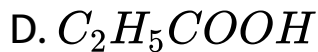
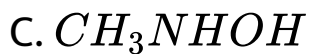


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4. When nitromethane is reduced with Zn dust + NH_4Cl in neutral medium, we get

A. CH_3NH_2

B. $C_2H_5NH_2$



Answer:



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5. Nitromethane condenses with acetaldehyde to give

A. nitro propane

B. 1-nitro-2-propanol

C. 2-nitro-1-propanol

D. 3-nitro propanol

Answer:



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6. Which of the following compounds has the smell of bitter almonds ?

A. aniline

B. nitro methane

C. benzene sulphonic acid

D. nitrobenzene

Answer:



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7. Nitration of nitrobenzene results in

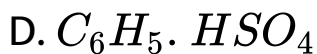
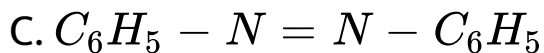
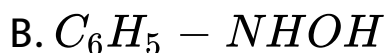
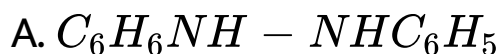
- A. o-dinitro benzene
- B. 1,3,5-trinitro benzene
- C. p-dinitro benzene
- D. m-dinitro benzene

Answer:



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8. Nitrobenzene on electrolytic reduction in con. sulphuric acid, the intermediate formed is



Answer:



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9. Electrophile used in the nitration of benzene is

A. hydronium ion

B. sulphonic acid

C. nitronium ion

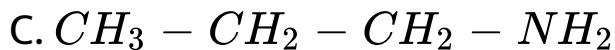
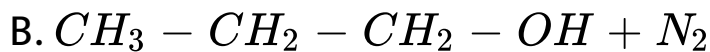
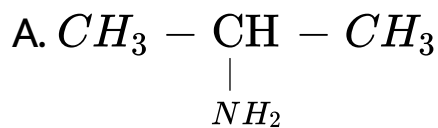
D. bromide ion

Answer:



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10. The reduction of $CH_3 - CH_2 - C \equiv N$ with sodium and alcohol results in the formation of



Answer:



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11. The basic character of amines is due to the

A. tetrahedral structure

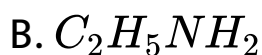
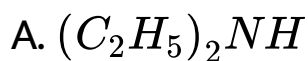
- B. presence of nitrogen atom
- C. lone pair of electrons on nitrogen atom
- D. high electronegativity of nitrogen

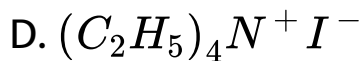
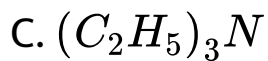
Answer:



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12. The organic compound that undergoes carbylamine reaction is





Answer:



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13. Primary amine acts as

A. Electrophile

B. Lewis base

C. Lewis acid

D. Free radical

Answer:



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14. Oxidation of aniline with acidified potassium dichromate gives

A. p-benzo quinone

B. benzoic acid

C. benzaldehyde

D. benzyl alcohol

Answer:



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15. Which one of the following is a secondary amine ?

A. aniline

B. diphenyl amine

C. sec.butylamine

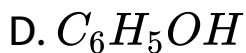
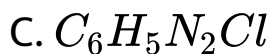
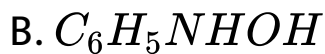
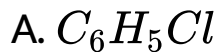
D. tert.butylamine

Answer:



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16. $C_6H_5NH_2 \xrightarrow{NaNO_2 / HCl} X$. Identify X.



Answer:



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17. Which of the following will not undergo diazotisation ?

A. m-toluidine

B. aniline

C. p-amino phenol

D. benzyl amine

Answer:



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18. Aniline differs from ethylamine by the reaction with

- A. metallic sodium
- B. an alkyl halide
- C. chloroform and caustic potash
- D. nitrous acid

Answer:



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19. When aqueous solution of benzene diazonium chloride is boiled the product formed is

- A. benzyl alcohol
- B. benzene + N_2
- C. phenol
- D. phenyl hydroxylamine

Answer:



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Self Evaluation B Answer In One Or Two Sentence

1. How will you synthesise, benzylamine from aniline ?



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Self Evaluation D Solve The Problems

1. Nitrobenzene does not undergo Friedel-Crafts alkylation. Give reasons.



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2. Boiling points of nitroalkanes are much higher than those of hydrocarbons of comparable mass - give reasons.



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3. Explain why amines are more basic than amides.



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4. An organic compound (A) with molecular formula C_6H_7N gives (B) with HNO_2 / HCl at 273

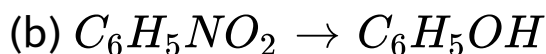
K. The aqueous solution of (B) on heating gives compound (C) which gives violet colour with neutral FeCl_3 . Identify the compounds A, B and C and write the equations.

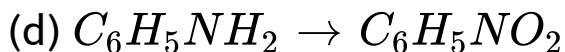
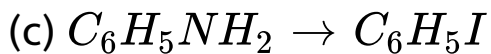


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Diazonium Chloride

1. How are the following conversions effected ?





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2. Starting from aniline how can the following be prepared ?

(a) Chloro benzene

(b) p-hydroxy azobenzene

(c) Benzonitrile

(d) (d) p-amino azo benzene



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3. How can the following conversion be effected ?

(a) Nitrobenzene to anisole

(b) Chloro benzene to phenyl hydrazine

(c) Aniline to benzoic acid

(d) Benzene diazonium chloride to Ethyl benzene

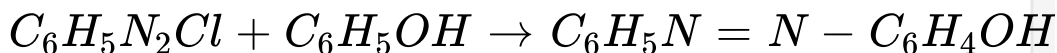


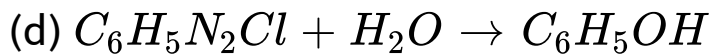
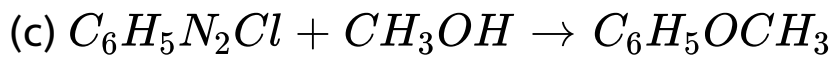
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4. Identify the electrophile and nucleophile in the following reactions :



(b)





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